Water Markets: Considerations and Suggestions

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Key Steps to Implement a Groundwater Market

1) Understanding baseline conditions

2) Setting equitable & fair allocations

3) Establishing trading rules, incentives, & development of best practices

4) Establishing monitoring protocols and developing a system of triggers

6) Establishing transparent trading platform

7) Implementing the market.

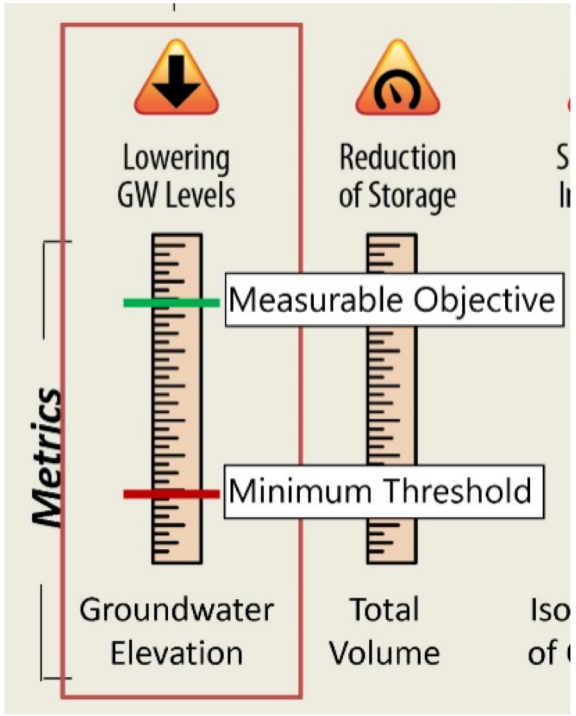
Step 1) Understanding Baseline Conditions

What do we have now?

- Description of the plan area and basin setting: groundwater conditions, water budget, hydrogeological conceptual model, management areas

How will we be more sustainable?

- Sustainability criteria: set sustainability goal, set minimum thresholds for undesirable results, set measurable objectives



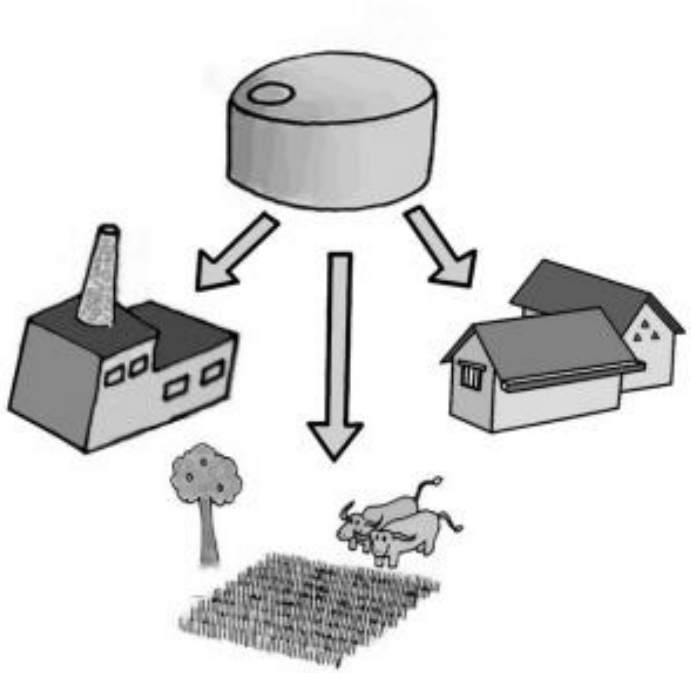
Why is this important?

→ From the sustainable yield GSAs will establish “pumping cap”

Step 2) Setting Equitable & Fair Allocations

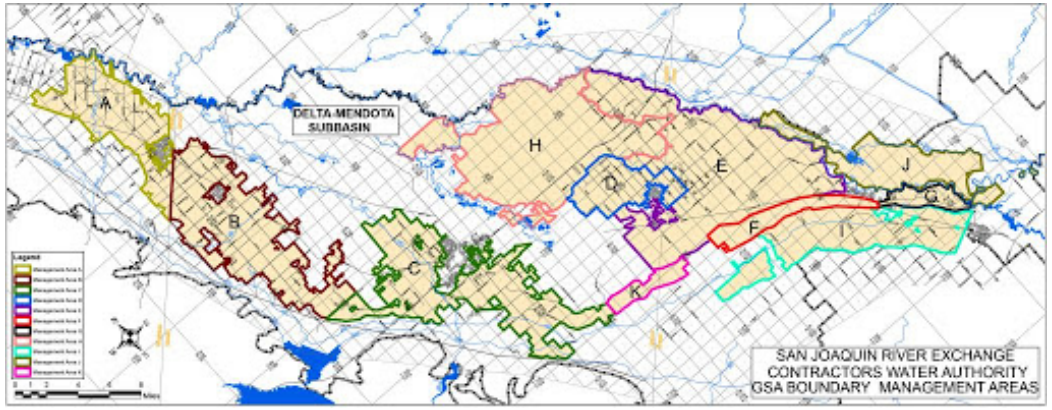
In order to determine groundwater allocations, GSAs will need to:

- Establish an extraction limit (pumping cap)
- Understand groundwater user needs
  - Including communities and future needs
- Understand legal requirements



Recommendation: GSAs establish a “set-aside” amount of groundwater for drinking water in order to meet public health and safety goals both now as well as into the future. Remaining groundwater can then be allocated and traded in the market. Each community can decide if they want to be participants in the market and trade their allocation.

Step 3) Establishing Trading Rules, Incentives, and Best Practices

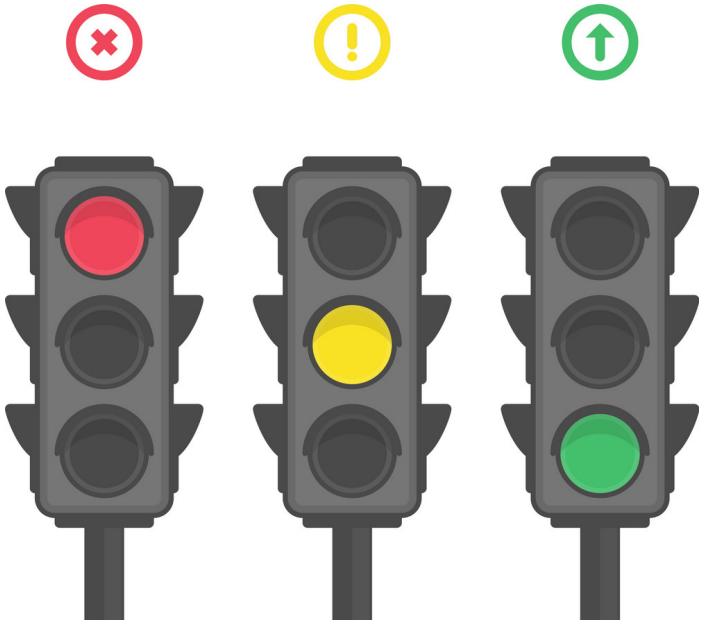


Management areas: decide if trading will be restricted to management areas or allow outside buyers

Subsidized market rates for unanticipated short-term drinking water needs: designate a fund to support subsidized rates for purchasing additional drinking water supplies in drought, or emergency, scenarios for communities participating in market

Incentivize groundwater recharge projects: offer incentive payments for locating a recharge site near a community reliant on shallow drinking water wells

Step 4) Monitoring Protocols & System of Triggers



Implement a monitoring network/protocol that includes the following elements:

- Ability to detect and prevent use or trading of groundwater that exceeds a user's allocation
- In areas where drinking water is more vulnerable:
  - Higher density of monitoring points
  - More frequent data collection of both groundwater levels and quality for contaminants of concern
  - Monitoring wells in shallow aquifer

Introduce a system of triggers, tied to the sustainable criteria and the monitoring network, that act as a warning system so the GSA has time to adjust actions in order to prevent or mitigate impacts to drinking water.

Step 5) Establishing Transparent Trading Platform & Step 6) Implementing the Market

Recommendations for building trust:

- Use data and stakeholder-driven process for developing allocations and structure/rules of market
- Develop transparent data sharing and trading platforms
  - Example: if using a website to facilitate trades allow all members of the public to access — even those not making trades
- Have a transparent decision making structure and clear leadership
- Abide by the Brown Act for all meetings and public materials
- Evaluate mechanisms that can be built into the system that allow for flexibility to adjust over time, to account for changing climatic conditions, and incorporate learning